15. The method of claim 14, wherein the function comprises hydrolysis of a β-glucoside having a long alkyl chain (LA-β-D-Glcp).

16. The method of claim 15, wherein the long alkyl chain has 8 or more carbon atoms.

17. The method of claim 14, wherein the enzyme has a high affinity to a β-glucoside having a long alkyl chain.

18. The method of claim 15, wherein the β-glucoside having a long alkyl chain is selected from the group consisting of n-Dodecyl-β-D-Glcp and n-Octyl-β-D-Glcp.

19. The method of claim 14, wherein the function comprises synthesis of an oligosaccharide or a heterosaccharide with optical purity.

20. The method of claim 14, wherein the conditions comprise temperatures of 100°C or higher.

21. The method of claim 14, wherein the conditions comprise an organic solvent.

22. The method of claim 14, wherein the enzyme is encoded by a nucleotide sequence comprising SEQ ID NO:1.

23. The method of claim 14, wherein the enzyme is encoded by a nucleotide sequence capable of hybridizing to SEQ ID NO:1, or its complement, under moderately stringent conditions of 6xSSC and 40% formamide at 42°C.

24. The method of claim 23, wherein the hybridization further comprises a washing step carried out in 1xSSC and 0% formamide at 55°C.

25. A method of producing a recombinant vector for the enzyme of claim 14, comprising:

a) providing a recombinant vector comprising the nucleotide encoding SEQ ID NO:2; and

b) transforming a host cell with the recombinant vector.

26. A method of producing the enzyme of claim 14, comprising:

a) providing an expression vector comprising the nucleotide encoding SEQ ID NO:2;

b) transforming a host cell with the expression vector;

c) culturing the host cell; and

d) expressing and collecting the enzyme.

C2

27. A method of solubilizing the enzyme of claim 14, wherein a solubilization condition comprises heating with about 2.5% Triton X-100 at about 85°C for about 15 min. --

Add D3